

turned, including the arms, and then without centering the ends of the arms the piece is casehardened. A row of hardened spiders is then strung on an arbor and sufficient metal is ground from the ends of the arms to remove the hardened case. This leaves the soft cores exposed for center drilling. By drilling

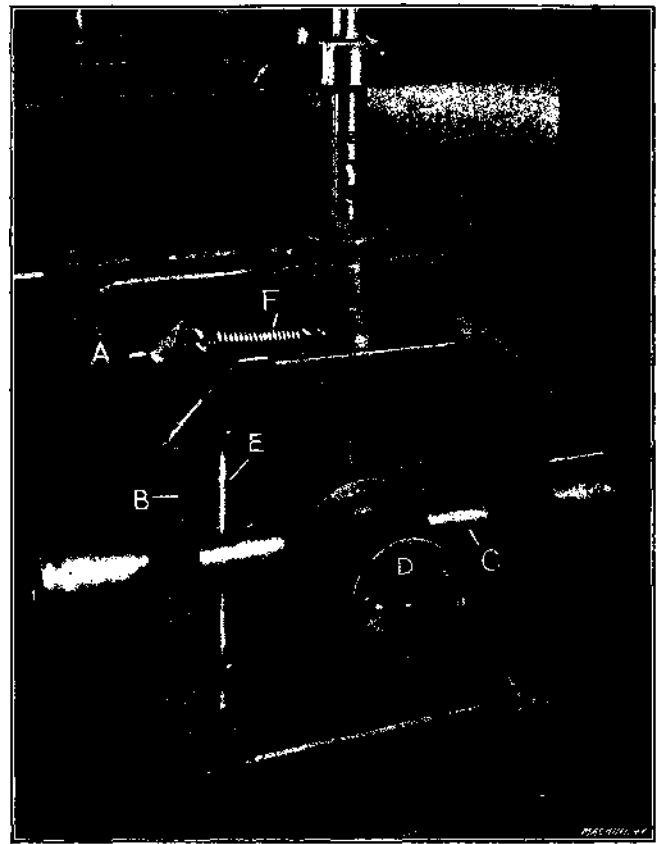


Fig. 12. Indexing Jig provided with Special Work-locating Device

after hardening, a better working center is obtained, and one that is not full of scale; moreover the centers are not influenced by any distortion that might occur in hardening.

The jig upon which the center drilling is done consists of the angle-iron base *A*, upon which is

swiveled the jig section *B*.
The spider, which is indicated
at *C*, is slipped over the
swiveling